

Untersuchung über Maximum und Minimum der Lichtstärke von erster Zerstreuung

Takao Sato

Fakultät von Erziehung, Nagasaki Universität

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Zusammenfassung

Der Verfasser hat die einen beliebigen Punkt in Himmel bestrahlenden Lichtstärke von erster Zerstreuung gerechnet, und damit die Untersuchung über ihr Max. und Min. ausgeführt.

1. Erklärung. Es sei nun O und \hat{O} ein beliebiger Punkt in Himmel und Mittelpunkt der Erde. Es sei sogar nun KM (KS) die Sonnenhöhe, IA (KP) das zu Sonne relative Azimut der aus O gesehenen Richtung, woraus die erste Zerstreuung S an O kommt, IZ (J) deren um 90 vergrößerte Höhe (d. h. Höhe+90), KH (KI) die Levelhöhe von O.

Dann wird S durch Funktion von Veränderlichen KM, IA, IZ, KH, und Wellenlänge ausgedrückt.

Der Verfasser denkt sich die Erdatmosphäre aus einer großen Anzahl 800 einander umschließender kugelförmiger Schichten mit 50 m Dicke zusammengesetzt, indem man für die obere Grenze der Atmosphäre 40 Km Höhe annimmt.

Er hat demach die numerische Auswertung von S bie allerlei Kombination für KM, IA, IZ, KH, L, unter den nachfolgenden Werten, der Reiche nach $0^\circ, 30^\circ, 60^\circ, 90^\circ$, den mit 30 teilbaren Werten zwischen 0° und 180° , identisch mit den vorigen, den mit 5 Km teilbaren Werten zwischen 0° und 40 Km, 3572, 4364, 4910, 5445, 6088, 6763, 7456, 8567, 9850, 11396, 14960, 25356, in Å Einheit.

Es ist jedenfalls zu ersehen, daß der Wert von S bei Durchgang von irgendeinziger Veränderliche, dagegen alle andere ungeändert bleiben, sich verändert, dazwischen irgendwo Extremalwerte erreichen. Der Wert von Veränderliche, wo Max. beziehungsweise Minimaler Wert von S erreicht, ist natürlich in Abhängigkeit von den Werten der eben gesagten ubrigen Veränderlichen. Ihr Verfahren läßt sich in Tafel synoptisch ausdrücken, indem man irgend zwei Veränderlichen aus den übrigen vier als Koordinaten-system währt. Die derartig gestalteten für Max. beziehungsweise Min. entsprechenden Tafeln betragen 5. ${}_4C_2=30$, hierbei 5 die Zahlen der Veränderlichen sind, woraus nur einzig sich wählen läßt, ${}_4C_2$ die Arten der Verfahren, zwei aus vier Veränderlichen zu wählen, ist.

Durch das großartige und ausführliche Fortran Programm kann man die oben

erwähnte Tafeln 60 folgendermassen veranschaulichen. Es wäre nur durch die Rechenmaschine möglich.

2 Fortran Programm. Es sei nun K_s, K_P, K_I, J, L der Reihe nach die Elemente von KM, IA, KH, IZ und L . Dann läßt sich S durch $S(K_s, K_P, K_I, J, L)$ ausdrücken.

Wie oben erklärt, verändert sich S bei Durchgang z. B. von K_s , mit all anderen (d. h. K_P, K_I, J, L) festgesetzt. Der Wert von Veränderliche, wo Extremalewert erreicht, ist natürlich ein Funktion von allen anderen Veränderlichen K_P, K_I, J, L .

Daher kann man diesen Wert mit $MXJ(K_s, K_P, K_I, L)$ beziehungsweise $MNJ(K_s, K_P, K_I, L)$, je nach dem zugehörigen Extremalewert entweder maximal oder minimal, ausdrücken. In ähnlicher Weise kann man leicht die Bedeutung von $MXKI(K_s, K_P, J, L)$, $MXKP(K_s, K_I, J, L)$, $MXKS(K_P, K_I, J, L)$ und $MXL(K_s, K_P, K_I, J)$ verstehen.

Im Falle des Minimalwertes, kann man die entsprechenden Ausdrücke, indem man X durch N ersetzt. In den Tafeln bedeutet Sonnenhöhe (oder SON), AZI, LEV, ALT, WVL , der Reihe nach, $KM(K_s)$, $IA(K_P)$, $KH(K_I)$, $IZ(J)$, L .

Der für beide Extremalewert gemeinsam gültige Zusammenhang zwischen den Tafeln und den jetzt erklärten Ausdrücken steht folgendermassen.

Nummer von Tafel

1 6	MXL
7 12	MXJ
13 18	$MXKI$
19 24	$MXKP$
25 30	$MXKS$

(Unvollendet, Fortsetzung folgt)

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      VOLLSTANDIGES PROGRAMM VON MAX UND MIN
REAL      S(4,7,9,7,12)      ,Z(7)
      INTEGER KM(4),KH(9),IZ(7),IA(7),MAX,MIN
1
2 7,12),MXK(4,9,7,12),MXKS(7,9,7,12)
3      ,MNL(4,7,9,7),MNJ(4,7,9,12),MNKI(4,7,7,12),MNKP(4,9,7,
4 12),MNKS(7,9,7,12)
      DO 1 KS=1,4
      KM(KS)=30*(KS-1)
      DO 1 KP=1,7
      IA(KP)=30*(KP-1)
      DO 1 KI=1,9
      KH(KI)=5*(KI-1)
      DO 1 J=1,7
      IZ(J)=30*(J-1)
      Z(J)=IZ(J)
1      CONTINUE
      DO 1600 M=1,4
      DO 1600 KPP=1,7
      DO 1600 KI=1,9
      DO 1600 J=1,7
      IF(M.EQ.4.AND.KPP.GT.1) GO TO 1600
      IF(KI.EQ.1.AND.J.LE.3) GO TO 1600
      IF(KI.EQ.9.AND.J.GE.4) GO TO 1600
      IF(KPP.GT.1.AND.J.EQ.1) GO TO 1600
      IF(KPP.GT.1.AND.J.EQ.7) GO TO 1600
      READ (S,1603) (S (M,KPP,KI,J,L),L=1,12)
1603  FORMAT(12F5,2)
1600  CONTINUE
      DO 1601 M=1,3
      DO 1601 KPP=2,7
      DO 1601 KI=1,9
      DO 1601 J=1,7,6
      DO 1601 L=1,12
      S(M,KPP,KI,J,L)=S(M,1,KI,J,L)
1601  CONTINUE
      M=4
      DO 1602 KPP=2,7
      DO 1602 KI=1,9
      DO 1602 J=1,7
      DO 1602 L=1,12
      S(M,KPP,KI,J,L)=S(M,1,KI,J,L)
1602  CONTINUE
      DO 3 KS=1,4
      DO 3 KP=1,7
      DO 3 KI=1,9
      DO 3 J=1,7
      K=KI
      IF(K.EQ.1.AND.J.LE.3) GO TO 3
      IF(K.EQ.9.AND.J.GE.4) GO TO 3
      MAX=-100

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      DO 4 L=1,12
      IF(MAX-S(KS,KP,KI,J,L)) 5,4,4
      MAX=S(KS,KP,KI,J,L)
      LX=L
4     CONTINUE
      MXL(KS,KP,KI,J) =LX
      MIN=100
      DO 6 L=1,12
      IF(MIN-S(KS,KP,KI,J,L)) 6,6,7
7     MIN=S(KS,KP,KI,J,L)
      LN=L
6     CONTINUE
      MNL(KS,KP,KI,J) =LN
3     CONTINUE
      DO 8 KS=1,4
      DO 8 KP=1,7
      DO 8 KI=1,9
      DO 8 L=1,12
      MAX=-100
      K=KI
      DO 9 J=1,7
      IF(K.EQ.1.AND,J.LE.3) GO TO 9
      IF(K.EQ.9.AND,J.GE.4) GO TO 9
      IF(MAX-S(KS,KP,KI,J,L)) 10,9,9
10    MAX=S(KS,KP,KI,J,L)
      JX=J
9     CONTINUE
      MXJ(KS,KP,KI, L)=JX
      MIN=100
      DO 11 J=1,7
      IF(K.EQ.1.AND,J.LE.3) GO TO 11
      IF(K.EQ.9.AND,J.GE.4) GO TO 11
      IF(MIN-S(KS,KP,KI,J,L)) 11,11,40
40    MIN=S(KS,KP,KI,J,L)
      JN=J
11    CONTINUE
      MNJ(KS,KP,KI,L)=JN
8     CONTINUE
      DO 12 KS=1,4
      DO 12 KP=1,7
      DO 12 J=1,7
      DO 12 L=1,12
      MAX=-100
      DO 13 KI=1,9
      K=KI
      IF(K.EQ.1.AND,J.LE.3) GO TO 13
      IF(K.EQ.9.AND,J.GE.4) GO TO 13
      IF(MAX-S(KS,KP,KI,J,L)) 14,13,13
14    MAX=S(KS,KP,KI,J,L)
      KIX=KI
13    CONTINUE
      MXKI(KS,KP,J,L)=KIX
      MIN=100
      DO 15 KI=1,9
      K=KI
      IF(K.EQ.1.AND,J.LE.3) GO TO 15
      IF(K.EQ.9.AND,J.GE.4) GO TO 15
      IF(MIN-S(KS,KP,KI,J,L)) 15,15,16
16    MIN=S(KS,KP,KI,J,L)
      KIN=KI
15    CONTINUE
      MNKI(KS,KP,J,L)=KIN
12    CONTINUE
      DO 17 KS=1,4
      DO 17 KI=1,9
      K=KI

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        DO 17 J=1,7
        DO 17 L=1,12
        IF(K.EQ.1.AND,J.LE.3) GO TO 17
        IF(K.EQ.9.AND,J.GE.4) GO TO 17
        MAX=-100
        DO 18 KP=1,7
        IF(MAX-S(KS,KP,KI,J,L)) 19,18,18
19      MAX=S(KS,KP,KI,J,L)
        KPX=KP
18      CONTINUE
        MXKP(KS,KI,J,L)=KPX
        MIN=100
        DO 20 KP=1,7
        IF(MIN-S(KS,KP,KI,J,L)) 20,20,21
21      MIN=S(KS,KP,KI,J,L)
        KPN=KP
20      CONTINUE
        MNKP(KS,KI,J,L)=KPN
17      CONTINUE
        DO 22 KP=1,7
        DO 22 KI=1,9
K=KI
        DO 22 J=1,7
        DO 22 L=1,12
        IF(K.EQ.1.AND,J.LE.3) GO TO 22
        MAX=-100
        IF(K.EQ.9.AND,J.GE.4) GO TO 22
        DO 23 KS=1,4
        IF(MAX-S(KS,KP,KI,J,L)) 24,23,23
24      MAX=S(KS,KP,KI,J,L)
        KSX=KS
23      CONTINUE
        MXKS(KP,KI,J,L)=KSX
        MIN=100
        DO 25 KS=1,4
        IF(MIN-S(KS,KP,KI,J,L)) 25,25,26
26      MIN=S(KS,KP,KI,J,L)
        KSN=KS
25      CONTINUE
        MNKS(KP,KI,J,L)=KSN
22      CONTINUE
        WRITE(6,599)
        KKK=1
        WRITE(6,601) KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,28) ((IZ(J),J=1,7),KS=1,4)
        DO 29 KP=1,7
WRITE(6,600)
        DO 29 KI=1,9
        IF(KI.EQ.1) GO TO 30
        IF(KI.EQ.5) GO TO 31
        IF(KI.EQ.9) GO TO 32
        WRITE(6,33) KH(KI),((MXL(KS,KP,KI,J),J=1,7),KS=1,4)
        GO TO 29
30      WRITE(6,34) KH(KI),((MXL(KS,KP,KI,J),J=4,7),KS=1,4)
        GO TO 29
31      WRITE(6,35) IA(KP,KH(KI),((MXL(KS,KP,KI,J),J=1,7),KS=1,4)
        GO TO 29
32      WRITE(6,36) KH(KI),((MXL(KS,KP,KI,J),J=1,3),KS=1,4)
29      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601) KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,37) ((IA(KP),KP=1,7),KS=1,4)
        DO 38 KI=1,9

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K=KI
  WRITE(6,600)
  DO 38 J=1,7
    IF(K.NE.9.AND.J.EQ.4) GO TO 39
    IF(K.EQ.1.AND.J.LE.3) GO TO 38
    IF(K.EQ.9.AND.J.GE.4) GO TO 38
    IF(K.EQ.9.AND.J.EQ.2) GO TO 39
    WRITE(6,33) IZ(J),((MXL(KS,KP,KI,J),KP=1,7),KS=1,4)
    GO TO 38
39  WRITE(6,35) KH(KI), IZ(J),((MXL(KS,KP,KI,J),KP=1,7),KS=1,4)
38  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,27) (KM(KS),KS=1,4)
    WRITE(6,42) ((IA(KP),KP=1,7),KS=1,4)
    DO 43 J=1,7
      WRITE(6,600)
      DO 43 KI=1,9
        IF(KI.EQ.5) GO TO 45
      K=KI
      IF(K.EQ.1.AND.J.LE.3) GO TO 43
      IF(K.EQ.9.AND.J.GE.4) GO TO 43
      WRITE(6,33) KH(KI),((MXL(KS,KP,KI,J),KP=1,7),KS=1,4)
      GO TO 43
45  WRITE(6,35) IZ(J),KH(KI),((MXL(KS,KP,KI,J),KP=1,7),KS=1,4)
43  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,49) (IZ(J),J=1,7)
    WRITE(6,50) ((KM(KS),KS=1,4),J=1,7)
    DO 51 KI=1,9
      WRITE(6,600)
      DO 51 KP=1,7
        IF(KI.EQ.1) GO TO 53
        IF(KI.EQ.9) GO TO 54
        IF(KP.EQ.4) GO TO 55
      WRITE(6,52) IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=1,7)
      GO TO 51
53  IF(KP.EQ.4) GO TO 56
      WRITE(6,57) IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=4,7)
      GO TO 51
56  WRITE(6,58) KH(KI), IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=4,7)
      GO TO 51
54  IF(KP.EQ.4) GO TO 59
      WRITE(6,44) IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=1,3)
      GO TO 51
59  WRITE(6,61) KH(KI), IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=1,3)
      GO TO 51
55  WRITE(6,62) KH(KI), IA(KP),((MXL(KS,KP,KI,J),KS=1,4),J=1,7)
51  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,49) (IZ(J),J=1,7)
    WRITE(6,47) ((KM(KS),KS=1,4),J=1,7)
    DO 63 KP=1,7
      WRITE(6,600)
      DO 63 KI=1,9
        IF(KI.EQ.1) GO TO 64
        IF(KI.EQ.5) GO TO 65
        IF(KI.EQ.9) GO TO 66
      WRITE(6,52) KH(KI),((MXL(KS,KP,KI,J),KS=1,4),J=1,7)
      GO TO 63
64  WRITE(6,57) KH(KI),((MXL(KS,KP,KI,J),KS=1,4),J=4,7)

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        GO TO 63
65      WRITE(6,62) IA(KP) ,KH(KI),((MXL(KS,KP,KI,J),KS=1,4),J=1,7)
        GO TO 63
66      WRITE(6,60)          KH(KI),((MXL(KS,KP,KI,J),KS=1,4),J=1,3 )
63      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,490)(IA(KP),KP=1,7)
        WRITE(6,67) ((KM(KS),KS=1,4),KP=1,7)
        DO 68          KI=1,9
        K=KI
        WRITE(6,600)
        DO 68          J=1,7
        IF(K,EQ,1) GO TO 69
        IF(K,EQ,9) GO TO 71
        GO TO 73
69      IF(J,LE,3) GO TO 68
        IF(J,EQ,5) GO TO 70
        WRITE(6,52)          IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
        GO TO 68
70      WRITE(6,62) KH(KI), IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
        GO TO 68
73      IF(J,EQ,4) GO TO 740
        WRITE(6,52)          IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
        GO TO 68
740     WRITE(6,62) KH(KI), IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
        GO TO 68
71      IF(J,GE,4) GO TO 68
        IF(J,EQ,2) GO TO 72
        WRITE(6,52)          IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
        GO TO 68
72      WRITE(6,62) KH(KI), IZ( J),((MXL(KS,KP,KI,J),KS=1,4),KP=1,7)
68      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,75) ((KH(KI),KI=1,9),KS=1,4)
        DO 76          KP=1,7
        WRITE(6,600)
        DO 76          L=1,12
        IF(L,EQ,6) GO TO 77
        WRITE(6,78) L,((MXJ(KS,KP,KI,L),KI=1,9),KS=1,4)
        GO TO 76
77      WRITE(6,79) IA(KP),L,((MXJ(KS,KP,KI,L),KI=1,9),KS=1,4)
76      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,80) ((IA(KP),KP=1,7),KS=1,4)
        DO 81          KI=1,9
        WRITE(6,600)
        DO 81          L=1,12
        IF(L,EQ,6) GO TO 82
        WRITE(6,83) L,((MXJ(KS,KP,KI,L),KP=1,7),KS=1,4)
        GO TO 81
82      WRITE(6,84) KH(KI),L,((MXJ(KS,KP,KI,L),KP=1,7),KS=1,4)
81      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,41) ((IA(KP),KP=1,7),KS=1,4)
        DO 85          KI=1,9

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WRITE(6,600)
  DO 85 KI=1,9
    IF(KI.EQ.5) GO TO 86
    WRITE(6,83) KH(KI), ((MXJ(KS,KP,KI,L),KP=1,7),KS=1,4)
    GO TO 85
86  WRITE(6,84) L,KH(KI),((MXJ(KS,KP,KI,L),KP=1,7),KS=1,4)
85  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,490) (IA(KP),KP=1,7)
    WRITE(6,850) ((KM(KS),KS=1,4),KP=1,7)
    DO 87 L=1,12
      WRITE(6,600)
      DO 87 KI=1,9
        IF(KI.EQ.5) GO TO 88
        WRITE(6,52) KH(KI),((MXJ(KS,KP,KI,L),KS=1,4),KP=1,7)
        GO TO 87
88  WRITE(6,62) L ,KH(KI),((MXJ(KS,KP,KI,L),KS=1,4),KP=1,7)
87  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,490) (IA(KP),KP=1,7)
    WRITE(6,851) ((KM(KS),KS=1,4),KP=1,7)
    DO 89 KI=1,9
      WRITE(6,600)
      DO 89 L=1,12
        IF(L.EQ.6) GO TO 90
        WRITE(6,52) L ,((MXJ(KS,KP,KI,L),KS=1,4),KP=1,7)
        GO TO 89
90  WRITE(6,62) KH(KI),L,((MXJ(KS,KP,KI,L),KS=1,4),KP=1,7)
89  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,46) (KH(KI),KI=1,9)
    WRITE(6,91) ((KM(KS),KS=1,4),KI=1,9)
    DO 92 L=1,12
      WRITE(6,600)
      DO 92 KP=1,7
        IF(KP.EQ.4) GO TO 93
        WRITE(6,94) IA(KP),((MXJ(KS,KP,KI,L),KS=1,4),KI=1,9)
        GO TO 92
93  WRITE(6,95) L,IA(KP),((MXJ(KS,KP,KI,L),KS=1,4),KI=1,9)
92  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,27) (KM(KS),KS=1,4)
    WRITE(6,97) ((IZ(J),J=1,7),KS=1,4)
    DO 98 KP=1,7
      WRITE(6,600)
      DO 98 L=1,12
        IF(L.EQ.6) GO TO 99
        WRITE(6,33) L,((MXKI(KS,KP,J,L),J=1,7),KS=1,4)
        GO TO 98
99  WRITE(6,35) IA(KP), L,((MXKI(KS,KP,J,L),J=1,7),KS=1,4)
98  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,601) KKK
    WRITE(6,27) (KM(KS),KS=1,4)
    WRITE(6,102) ((IZ(J),J=1,7),KS=1,4)
    DO 103 L=1,12
      WRITE(6,600)

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DO 103 KP=1,7
IF(KP.EQ.4) GO TO 104
WRITE(6,33) IA(KP) ,((MXKI(KS,KP,J,L),J=1,7),KS=1,4)
GO TO 103
104 WRITE(6,35) L,IA(KP) ,((MXKI(KS,KP,J,L),J=1,7),KS=1,4)
103 CONTINUE
WRITE(6,599)
KKK=KKK+1
WRITE(6,601) KKK
WRITE(6,27) (KM(KS),KS=1,4)
WRITE(6,107) ((IA(KP),KP=1,7),KS=1,4)
DO 108 J=1,7
WRITE(6,600)
DO 108 L=1,12
IF(L.EQ.6) GO TO 109
WRITE(6,33) L,((MXKI(KS,KP,J,L),KP=1,7),KS=1,4)
GO TO 108
109 WRITE(6,35) IZ(J), L,((MXKI(KS,KP,J,L),KP=1,7),KS=1,4)
108 CONTINUE
WRITE(6,599)
KKK=KKK+1
WRITE(6,601) KKK
WRITE(6,490) (IA(KP),KP=1,7)
WRITE(6,111) ((KM(KS),KS=1,4),KP=1,7)
DO 112 L=1,12
WRITE(6,600)
DO 112 J=1,7
IF(J.EQ.4) GO TO 113
WRITE(6,52) IZ(J),((MXKI(KS,KP,J,L),KS=1,4),KP=1,7)
GO TO 112
113 WRITE(6,62) L, IZ(J),((MXKI(KS,KP,J,L),KS=1,4),KP=1,7)
112 CONTINUE
WRITE(6,599)
KKK=KKK+1
WRITE(6,601) KKK
WRITE(6,490) (IA(KP),KP=1,7)
WRITE(6,114) ((KM(KS),KS=1,4),KP=1,7)
DO 115 J=1,7
WRITE(6,600)
DO 115 L=1,12
IF(L.EQ.6) GO TO 116
WRITE(6,52) L,((MXKI(KS,KP,J,L),KS=1,4),KP=1,7)
GO TO 115
116 WRITE(6,62) IZ(J),L,((MXKI(KS,KP,J,L),KS=1,4),KP=1,7)
115 CONTINUE
WRITE(6,599)
KKK=KKK+1
WRITE(6,601) KKK
WRITE(6,49) (IZ(J),J=1,7)
WRITE(6,117) ((KM(KS),KS=1,4),KP=1,7)
DO 118 L=1,12
WRITE(6,600)
DO 118 KP=1,7
IF(KP.EQ.4) GO TO 119
WRITE(6,52) IA(KP),((MXKI(KS,KP,J,L),KS=1,4),J=1,7)
GO TO 118
119 WRITE(6,62) L, IA(KP),((MXKI(KS,KP,J,L),KS=1,4),J=1,7)
118 CONTINUE
WRITE(6,599)
KKK=KKK+1
WRITE(6,601) KKK
WRITE(6,27) (KM(KS),KS=1,4)
WRITE(6,120) ((IZ(J),J=1,7),KS=1,4)
DO 121 L=1,12
WRITE(6,600)
DO 121 KI=1,0

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      IF(KI, EQ, 1)      GO TO 122
      IF(KI, EQ, 5)      GO TO 123
      IF(KI, EQ, 9)      GO TO 124
      WRITE(6, 33)       KH(KI), ((MXKP(KS, KI, J, L), J=1, 7), KS=1, 4)
      GO TO 121
122  WRITE(6, 34)       KH(KI), ((MXKP(KS, KI, J, L), J=4, 7), KS=1, 4)
      GO TO 121
123  WRITE(6, 35)       L, KH(KI), ((MXKP(KS, KI, J, L), J=1, 7), KS=1, 4)
      GO TO 121
124  WRITE(6, 36)       KH(KI), ((MXKP(KS, KI, J, L), J=1, 3), KS=1, 4)
121  CONTINUE
      WRITE(6, 599)
      KKK=KKK+1
      WRITE(6, 601)      KKK
      WRITE(6, 27) (KM(KS), KS=1, 4)
      WRITE(6, 125) ((IZ(J), J=1, 7), KS=1, 4)
      DO 126             KI=1, 9
      WRITE(6, 600)
      DO 126             L=1, 12
      IF(KI, EQ, 1)      GO TO 127
      IF(KI, EQ, 9) GO TO 129
      IF(L, EQ, 6) GO TO 128
      WRITE(6, 33)       L, ((MXKP(KS, KI, J, L), J=1, 7), KS=1, 4)
      GO TO 126
127  IF(L, EQ, 6) GO TO 140
      WRITE(6, 34)       L, ((MXKP(KS, KI, J, L), J=4, 7), KS=1, 4)
      GO TO 126
140  WRITE(6, 74) KH(KI), L, ((MXKP(KS, KI, J, L), J=4, 7), KS=1, 4)
      GO TO 126
129  IF(L, EQ, 6) GO TO 141
      WRITE(6, 36)       L, ((MXKP(KS, KI, J, L), J=1, 3), KS=1, 4)
      GO TO 126
141  WRITE(6, 142) KH(KI), L, ((MXKP(KS, KI, J, L), J=1, 3), KS=1, 4)
      GO TO 126
128  WRITE(6, 35) KH(KI), L, ((MXKP(KS, KI, J, L), J=1, 7), KS=1, 4)
126  CONTINUE
      WRITE(6, 599)
      KKK=KKK+1
      WRITE(6, 27) (KM(KS), KS=1, 4)
      WRITE(6, 601)      KKK
      WRITE(6, 130) ((KH(KI), KI=1, 9), KS=1, 4)
      DO 131             J=1, 7
      WRITE(6, 600)
      DO 131             L=1, 12
      IF(J, LE, 3) GO TO 132
      IF(J, GE, 4) GO TO 133
132  IF(L, EQ, 6) GO TO 134
      WRITE(6, 135)       L, ((MXKP(KS, KI, J, L), KI=2, 9), KS=1, 4)
      GO TO 131
134  WRITE(6, 136) IZ(J), L, ((MXKP(KS, KI, J, L), KI=2, 9), KS=1, 4)
      GO TO 131
133  IF(L, EQ, 6) GO TO 137
      WRITE(6, 138)       L, ((MXKP(KS, KI, J, L), KI=1, 8), KS=1, 4)
      GO TO 131
137  WRITE(6, 139) IZ(J), L, ((MXKP(KS, KI, J, L), KI=1, 8), KS=1, 4)
      GO TO 131
131  CONTINUE
      WRITE(6, 599)
      KKK=KKK+1
      WRITE(6, 601)      KKK
      WRITE(6, 144) (IZ(J), J=1, 7)
      WRITE(6, 145) ((KM(KS), KS=1, 4), J=1, 7)
      DO 146             KI=1, 9
      WRITE(6, 600)
      DO 146             L=1, 12
      IF(KI, EQ, 1)      GO TO 147

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        IF(KI.EQ.9) GO TO 148
        IF(L.EQ.6) GO TO 149
        WRITE(6,150)      L,((MXKP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 146
149      WRITE(6,151) KH(KI), L,((MXKP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 146
147      IF(L.EQ.6) GO TO 152
        WRITE(6,152)      L,((MXKP(KS,KI,J,L),KS=1,4),J=4,7)
        GO TO 146
152      WRITE(6,154) KH(KI), L,((MXKP(KS,KI,J,L),KS=1,4),J=4,7)
        GO TO 146
148      IF(L.EQ.6) GO TO 155
        WRITE(6,156)      L,((MXKP(KS,KI,J,L),KS=1,4),J=1,3)
        GO TO 146
155      WRITE(6,157) KH(KI), L,((MXKP(KS,KI,J,L),KS=1,4),J=1,3)
146      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,144) (IZ(J), J=1,7)
        WRITE(6,153) ((KM(KS),KS=1,4),J=1,7)
        DO 158 L=1,12
        WRITE(6,600)
        DO 158 KI=1,9
        IF(KI.EQ.1) GO TO 159
        IF(KI.EQ.5) GO TO 160
        IF(KI.EQ.9) GO TO 161
        WRITE(6,162) KH(KI), ((MXKP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 158
160      WRITE(6,163) L, KH(KI), ((MXKP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 158
159      WRITE(6,164) KH(KI), ((MXKP(KS,KI,J,L),KS=1,4),J=4,7)
        GO TO 158
161      WRITE(6,165) KH(KI), ((MXKP(KS,KI,J,L),KS=1,4),J=1,3)
158      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,166) (KH(KI),KI=1,9)
        WRITE(6,167) ((KM(KS),KS=1,4),KI=1,9)
        DO 168 L=1,12
        WRITE(6,600)
        DO 168 J=1,7
        IF(J.LE.3) GO TO 169
        IF(J.EQ.4) GO TO 170
        IF(J.GT.4) GO TO 171
169      WRITE(6,172) IZ(J),((MXKP(KS,KI,J,L),KS=1,4),KI=2,9)
        GO TO 168
170      WRITE(6,173) L, IZ(J),((MXKP(KS,KI,J,L),KS=1,4),KI=1,8)
        GO TO 168
171      WRITE(6,174) IZ(J),((MXKP(KS,KI,J,L),KS=1,4),KI=1,8)
168      CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,601)      KKK
        WRITE(6,175) (IA(KP),KP=1,7)
        WRITE(6,176) ((KI,KI=1,9),KP=1,7)
        DO 177 L=1,12
        WRITE(6,600)
        DO 177 J=1,7
        IF(J.LE.3) GO TO 178
        IF(J.EQ.4) GO TO 179
        IF(J.GT.4) GO TO 180
178      WRITE(6,182) IZ(J),((MXKS(KP,KI,J,L),KI=2,9),KP=1,7)
        GO TO 177
179      WRITE(6,183) L, IZ(J),((MXKS(KP,KI,J,L),KI=1,8),KP=1,7)

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      GO TO 177
180  WRITE(6,189 )      IZ(J) ,((MXKS(KP,KI,J,L),KI=1,8),KP=1,7)
177  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601)      KKK
      WRITE(6,175 )      (IA(KP),KP=1,7)
      WRITE(6,184 )      ((KI,KI=1,9),KP=1,7)
      DO 185             J=1,7
        WRITE(6,600)
        DO 185 L=1,12
          IF(J.LE.3) GO TO 186
          IF(J.GE.4) GO TO 187
          WRITE(6,181)    L,((MXKS(KP,KI,J,L),KI=1,9),KP=1,7)
        GO TO 185
188  WRITE(6,190 ) IZ(J),L ,((MXKS(KP,KI,J,L),KI=1,9),KP=1,7)
      GO TO 185
186  IF(L.EQ.6) GO TO 193
      WRITE(6,191 )      L ,((MXKS(KP,KI,J,L),KI=2,9),KP=1,7)
      GO TO 185
193  WRITE(6,192 ) IZ(J), L ,((MXKS(KP,KI,J,L),KI=2,9),KP=1,7)
      GO TO 185
187  IF(L.EQ.6) GO TO 194
      WRITE(6,189 )      L ,((MXKS(KP,KI,J,L),KI=1,8),KP=1,7)
      GO TO 185
194  WRITE(6,195 ) IZ(J), L ,((MXKS(KP,KI,J,L),KI=1,8),KP=1,7)
185  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601)      KKK
      WRITE(6,196 )      (IA(KP),KP=1,7)
      WRITE(6,197 )      ((J,J=1,7),KP=1,7)
      DO 198             KI=1,9
        WRITE(6,600)
        DO 198 L=1,12
          IF(KI.EQ.1) GO TO 199
          IF(KI.EQ.9) GO TO 200
          IF(L.EQ.6) GO TO 201
          WRITE(6,202)    L ,((MXKS(KP,KI,J,L), J=1,7),KP=1,7)
        GO TO 198
201  WRITE(6,203) KH(KI), L ,((MXKS(KP,KI,J,L), J=1,7),KP=1,7)
      GO TO 198
199  IF(L.EQ.6) GO TO 204
      WRITE(6,205)      L ,((MXKS(KP,KI,J,L), J=4,7),KP=1,7)
      GO TO 198
204  WRITE(6,206) KH(KI),L ,((MXKS(KP,KI,J,L), J=4,7),KP=1,7)
      GO TO 198
200  IF(L.EQ.6) GO TO 207
      WRITE(6,208)      L ,((MXKS(KP,KI,J,L), J=1,3),KP=1,7)
      GO TO 198
207  WRITE(6,209) KH(KI), L ,((MXKS(KP,KI,J,L), J=1,3),KP=1,7)
198  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601)      KKK
      WRITE(6,210 )      (KH(KI),KI=1,9)
      WRITE(6,211 )      ((KP,KP=1,7),KI=1,9)
      DO 212             L=1,12
        WRITE(6,600)
        DO 212             J=1,7
          IF(J.LE.3) GO TO 213
          IF(J.EQ.4) GO TO 214
          IF(J.GT.4) GO TO 215
213  WRITE(6,216) IZ(J),((MXKS(KP,KI,J,L),KP=1,7),KI=2,9)
      GO TO 212
214  WRITE(6,217) I, IZ(J),((MXKS(KP,KI,J,L),KP=1,7),KI=1,8)

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      GO TO 212
215 WRITE(6,218) IZ(J) ,((MXKS(KP,KI,J,L),KP=1,7),KI=1,8)
212 CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601) KKK
      WRITE(6,210) (KH(KI),KI=1,9)
      WRITE(6,603) ((KP,KP=1,7),KI=1,9)
      DO 219 J=1,7
        WRITE(6,600)
        DO 219 L=1,12
          IF(J.LE,3) GO TO 220
          IF(J.GE,4) GO TO 221
220 IF(L.EQ,6) GO TO 222
          WRITE(6,223) L,((MXKS(KP,KI,J,L),KP=1,7),KI=2,9)
          GO TO 219
222 WRITE(6,224) IZ(J), L,((MXKS(KP,KI,J,L),KP=1,7),KI=2,9)
          GO TO 219
221 IF(L.EQ,6) GO TO 225
          WRITE(6,218) L,((MXKS(KP,KI,J,L),KP=1,7),KI=1,8)
          GO TO 219
225 WRITE(6,217) IZ(J), L,((MXKS(KP,KI,J,L),KP=1,7),KI=1,8)
219 CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,601) KKK
      WRITE(6,226) (IZ(J),J=1,7)
      WRITE(6,227) ((KP,KP=1,7),J=1,7)
      DO 228 L=1,12
        WRITE(6,600)
        DO 228 KI=1,9
          IF(KI.EQ,1) GO TO 229
          IF(KI.EQ,5) GO TO 230
          IF(KI.EQ,9) GO TO 231
          WRITE(6,232) KH(KI),((MXKS(KP,KI,J,L),KP=1,7),J=1,7)
          GO TO 228
229 WRITE(6,233) KH(KI),((MXKS(KP,KI,J,L),KP=1,7),J=4,7)
          GO TO 228
230 WRITE(6,234) L, KH(KI),((MXKS(KP,KI,J,L),KP=1,7),J=1,7)
          GO TO 228
231 WRITE(6,235) KH(KI),((MXKS(KP,KI,J,L),KP=1,7),J=1,3)
228 CONTINUE
      KKK=1
      WRITE(6,602) KKK
      WRITE(6,27) (KM(KS),KS=1,4)
      WRITE(6,28) ((IZ(J),J=1,7),KS=1,4)
      DO 2900 KP=1,7
        WRITE(6,600)
        DO 2900 KI=1,9
          IF(KI.EQ,1) GO TO 3000
          IF(KI.EQ,5) GO TO 3100
          IF(KI.EQ,9) GO TO 3200
          WRITE(6,33) KH(KI),((MNL(KS,KP,KI,J),J=1,7),KS=1,4)
          GO TO 2900
3000 WRITE(6,34) KH(KI),((MNL(KS,KP,KI,J),J=4,7),KS=1,4)
          GO TO 2900
3100 WRITE(6,35) IA(KP),KH(KI),((MNL(KS,KP,KI,J),J=1,7),KS=1,4)
          GO TO 2900
3200 WRITE(6,36) KH(KI),((MNL(KS,KP,KI,J),J=1,3),KS=1,4)
2900 CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,27) (KM(KS),KS=1,4)
      WRITE(6,37) ((IA(KP),KP=1,7),KS=1,4)
      DO 3800 KI=1,9

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      K=KI
      WRITE(6,600)
      DO 3800 J=1,7
      IF(K.NE.9.AND.J.EQ.4) GO TO 3900
      IF(K.EQ.1.AND.J.LE.3) GO TO 3800
      IF(K.EQ.9.AND.J.GE.4) GO TO 3800
      IF(K.EQ.9.AND.J.EQ.2) GO TO 3900
      WRITE(6,33) IZ(J),((MNL(KS,KP,KI,J),KP=1,7),KS=1,4)
      GO TO 3800
3900  WRITE(6,35) KH(KI), IZ(J),((MNL(KS,KP,KI,J),KP=1,7),KS=1,4)
3800  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,27) (KM(KS),KS=1,4)
      WRITE(6,42) ((IA(KP),KP=1,7),KS=1,4)
      DO 4300 J=1,7
      WRITE(6,600)
      DO 4300 KI=1,9
      IF(KI.EQ.5) GO TO 4500
      K=KI
      IF(K.EQ.1.AND.J.LE.3) GO TO 4300
      IF(K.EQ.9.AND.J.GE.4) GO TO 4300
      WRITE(6,33) KH(KI),((MNL(KS,KP,KI,J),KP=1,7),KS=1,4)
      GO TO 4300
4500  WRITE(6,35) IZ(J),KH(KI),((MNL(KS,KP,KI,J),KP=1,7),KS=1,4)
4300  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,49) (IZ(J),J=1,7)
      WRITE(6,50) ((KM(KS),KS=1,4),J=1,7)
      DO 5100 KI=1,9
      WRITE(6,600)
      DO 5100 KP=1,7
      IF(KI.EQ.1) GO TO 5300
      IF(KI.EQ.9) GO TO 5400
      IF(KP.EQ.4) GO TO 5500
      WRITE(6,52) IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=1,7)
      GO TO 5100
5300  IF(KP.EQ.4) GO TO 5600
      WRITE(6,57) IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=4,7)
      GO TO 5100
5600  WRITE(6,58) KH(KI), IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=4,7)
      GO TO 5100
5400  IF(KP.EQ.4) GO TO 5900
      WRITE(6,44) IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=1,3)
      GO TO 5100
5900  WRITE(6,61) KH(KI), IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=1,3)
      GO TO 5100
5500  WRITE(6,62) KH(KI), IA(KP),((MNL(KS,KP,KI,J),KS=1,4),J=1,7)
5100  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,49) (IZ(J),J=1,7)
      WRITE(6,47) ((KM(KS),KS=1,4),J=1,7)
      DO 6300 KP=1,7
      WRITE(6,600)
      DO 6300 KI=1,9
      IF(KI.EQ.1) GO TO 6400
      IF(KI.EQ.5) GO TO 6500
      IF(KI.EQ.9) GO TO 6600
      WRITE(6,52) KH(KI),((MNL(KS,KP,KI,J),KS=1,4),J=1,7)
      GO TO 6300
6400  WRITE(6,57) KH(KI),((MNL(KS,KP,KI,J),KS=1,4),J=4,7)

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        GO TO 6300
6500   WRITE(6,62) IA(KP) ,KH(KI),((MNL(KS,KP,KI,J),KS=1,4),J=1,7)
        GO TO 6300
6600   WRITE(6,60)          KH(KI),((MNL(KS,KP,KI,J),KS=1,4),J=1,3 )
6300   CONTINUE
        WRITE(6,599)
      KKK=KKK+1
        WRITE(6,602) KKK
        WRITE(6,490)(IA(KP),KP=1,7)
        WRITE(6,67) ((KM(KS),KS=1,4),KP=1,7)
          DO 6800 KI=1,9
            K=KI
            WRITE(6,600)
              DO 6800 J=1,7
                IF(K.EQ.1) GO TO 6900
                IF(K.EQ.9) GO TO 7100
                GO TO 7300
6900   IF(J.LE.3) GO TO 6800
                IF(J.EQ.5) GO TO 7000
                WRITE(6,52) IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
                GO TO 6800
7000   WRITE(6,62) KH(KI), IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
                GO TO 6800
7300   IF(J.EQ.4) GO TO 7400
                WRITE(6,52) IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
                GO TO 6800
7400   WRITE(6,62) KH(KI), IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
                GO TO 6800
7100   IF(J.GE.4) GO TO 6800
                IF(J.EQ.2) GO TO 7200
                WRITE(6,52) IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
                GO TO 6800
7200   WRITE(6,62) KH(KI), IZ( J),((MNL(KS,KP,KI,J),KS=1,4),KP=1,7)
6800   CONTINUE
        WRITE(6,599)
      KKK=KKK+1
        WRITE(6,602) KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,75) ((KH(KI),KI=1,9),KS=1,4)
          DO 7600 KP=1,7
            WRITE(6,600)
              DO 7600 L=1,12
                IF(L.EQ.6) GO TO 7700
                WRITE(6,78) L,((MNJ(KS,KP,KI,L),KI=1,9),KS=1,4)
                GO TO 7600
7700   WRITE(6,79) IA(KP),L,((MNJ(KS,KP,KI,L),KI=1,9),KS=1,4)
7600   CONTINUE
        WRITE(6,599)
      KKK=KKK+1
        WRITE(6,602) KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,80) ((IA(KP),KP=1,7),KS=1,4)
          DO 8100 KI=1,9
            WRITE(6,600)
              DO 8100 L=1,12
                IF(L.EQ.6) GO TO 8200
                WRITE(6,83) L,((MNJ(KS,KP,KI,L),KP=1,7),KS=1,4)
                GO TO 8100
8200   WRITE(6,84) KH(KI),L,((MNJ(KS,KP,KI,L),KP=1,7),KS=1,4)
8100   CONTINUE
        WRITE(6,599)
      KKK=KKK+1
        WRITE(6,602) KKK
        WRITE(6,27) (KM(KS),KS=1,4)
        WRITE(6,41) ((IA(KP),KP=1,7),KS=1,4)
          DO 8500 L=1,12

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WRITE(6,600)
  DO 8500 KI=1,9
    IF(KI.EQ.5) GO TO 8600
    WRITE(6,83) KH(KI), ((MNJ(KS,KP,KI,L),KP=1,7),KS=1,4)
    GO TO 8500
8600  WRITE(6,84) L,KH(KI),((MNJ(KS,KP,KI,L),KP=1,7),KS=1,4)
8500  CONTINUE
    WRITE(6,599)
    KKK=KKK+1
    WRITE(6,602) KKK
    WRITE(6,490) (IA(KP),KP=1,7)
    WRITE(6,850) ((KM(KS),KS=1,4),KP=1,7)
    DO 8700 L=1,12
      WRITE(6,600)
      DO 8700 KI=1,9
        IF(KI.EQ.5) GO TO 8800
        WRITE(6,52) KH(KI),((MNJ(KS,KP,KI,L),KS=1,4),KP=1,7)
        GO TO 8700
8800  WRITE(6,62) L ,KH(KI),((MNJ(KS,KP,KI,L),KS=1,4),KP=1,7)
8700  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,490) (IA(KP),KP=1,7)
      WRITE(6,851) ((KM(KS),KS=1,4),KP=1,7)
      DO 8900 KI=1,9
        WRITE(6,600)
        DO 8900 L=1,12
          IF(L.EQ.6) GO TO 9000
          WRITE(6,52) L ,((MNJ(KS,KP,KI,L),KS=1,4),KP=1,7)
          GO TO 8900
9000  WRITE(6,62) KH(KI),L,((MNJ(KS,KP,KI,L),KS=1,4),KP=1,7)
8900  CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,602) KKK
        WRITE(6,46) (KH(KI),KI=1,9)
        WRITE(6,91) ((KM(KS),KS=1,4),KI=1,9)
        DO 9200 L=1,12
          WRITE(6,600)
          DO 9200 KP=1,7
            IF(KP.EQ.4) GO TO 9300
            WRITE(6,94) IA(KP),((MNJ(KS,KP,KI,L),KS=1,4),KI=1,9)
            GO TO 9200
9300  WRITE(6,95) L,IA(KP),((MNJ(KS,KP,KI,L),KS=1,4),KI=1,9)
9200  CONTINUE
          WRITE(6,599)
          KKK=KKK+1
          WRITE(6,602) KKK
          WRITE(6,27) (KM(KS),KS=1,4)
          WRITE(6,97) ((IZ(J),J=1,7),KS=1,4)
          DO 9800 KP=1,7
            WRITE(6,600)
            DO 9800 L=1,12
              IF(L.EQ.6) GO TO 9900
              WRITE(6,33) L,((MNKI(KS,KP,J,L),J=1,7),KS=1,4)
              GO TO 9800
9900  WRITE(6,35) IA(KP), L,((MNKI(KS,KP,J,L),J=1,7),KS=1,4)
9800  CONTINUE
            WRITE(6,599)
            KKK=KKK+1
            WRITE(6,602) KKK
            WRITE(6,27) (KM(KS),KS=1,4)
            WRITE(6,102) ((IZ(J),J=1,7),KS=1,4)
            DO 10300 L=1,12
              WRITE(6,600)

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      DO 10300 KP=1,7
      IF(KP.EQ.4) GO TO 10400
      WRITE(6,33) IA(KP) ,((MNKI(KS,KP,J,L),J=1,7),KS=1,4)
      GO TO 10300
10400  WRITE(6,35) L,IA(KP) ,((MNKI(KS,KP,J,L),J=1,7),KS=1,4)
10300  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,27) (KM(KS),KS=1,4)
      WRITE(6,107) ((IA(KP),KP=1,7),KS=1,4)
      DO 10800 J=1,7
      WRITE(6,600)
      DO 10800 L=1,12
      IF(L.EQ.6) GO TO 10900
      WRITE(6,33) L,((MNKI(KS,KP,J,L),KP=1,7),KS=1,4)
      GO TO 10800
10900  WRITE(6,35) IZ(J), L,((MNKI(KS,KP,J,L),KP=1,7),KS=1,4)
10800  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,490) (IA(KP),KP=1,7)
      WRITE(6,111) ((KM(KS),KS=1,4),KP=1,7)
      DO 11200 L=1,12
      WRITE(6,600)
      DO 11200 J=1,7
      IF(J.EQ.4) GO TO 11300
      WRITE(6,52) IZ(J),((MNKI(KS,KP,J,L),KS=1,4),KP=1,7)
      GO TO 11200
11300  WRITE(6,62) L, IZ(J),((MNKI(KS,KP,J,L),KS=1,4),KP=1,7)
11200  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,490) (IA(KP),KP=1,7)
      WRITE(6,114) ((KM(KS),KS=1,4),KP=1,7)
      DO 11500 J=1,7
      WRITE(6,600)
      DO 11500 L=1,12
      IF(L.EQ.6) GO TO 11600
      WRITE(6,52) L,((MNKI(KS,KP,J,L),KS=1,4),KP=1,7)
      GO TO 11500
11600  WRITE(6,62) IZ(J),L,((MNKI(KS,KP,J,L),KS=1,4),KP=1,7)
11500  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,49) (IZ(J),J=1,7)
      WRITE(6,117) ((KM(KS),KS=1,4),KP=1,7)
      DO 11800 L=1,12
      WRITE(6,600)
      DO 11800 KP=1,7
      IF(KP.EQ.4) GO TO 11900
      WRITE(6,52) IA(KP),((MNKI(KS,KP,J,L),KS=1,4),J=1,7)
      GO TO 11800
11900  WRITE(6,62) L, IA(KP),((MNKI(KS,KP,J,L),KS=1,4),J=1,7)
11800  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,27) (KM(KS),KS=1,4)
      WRITE(6,120) ((IZ(J),J=1,7),KS=1,4)
      DO 12100 L=1,12
      WRITE(6,600)
      DO 12100 K=1,9

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      IF(KI,EQ,1)      GO TO 12200
      IF(KI,EQ,5)      GO TO 12300
      IF(KI,EQ,9)      GO TO 12400
      WRITE(6,33)      KH(KI),((MNKP(KS,KI,J,L),J=1,7),KS=1,4)
      GO TO 12100
12200  WRITE(6,34)      KH(KI),((MNKP(KS,KI,J,L),J=4,7),KS=1,4)
      GO TO 12100
12300  WRITE(6,35)      L, KH(KI),((MNKP(KS,KI,J,L),J=1,7),KS=1,4)
      GO TO 12100
12400  WRITE(6,36)      KH(KI),((MNKP(KS,KI,J,L),J=1,3),KS=1,4)
12100  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602)      KKK
      WRITE(6,27) (KM(KS),KS=1,4)
      WRITE(6,125) ((IZ(J),J=1,7),KS=1,4)
      DO 12600          KI=1,9
      WRITE(6,600)
      DO 12600          L=1,12
      IF(KI,EQ,1)      GO TO 12700
      IF(KI,EQ,9)      GO TO 12900
      IF(L,EQ,6) GO TO 12800
      WRITE(6,33)      L,((MNKP(KS,KI,J,L),J=1,7),KS=1,4)
      GO TO 12600
12700 IF(L,EQ,6) GO TO 14000
      WRITE(6,34)      L,((MNKP(KS,KI,J,L),J=4,7),KS=1,4)
      GO TO 12600
14000  WRITE(6,74) KH(KI), L,((MXKP(KS,KI,J,L),J=4,7),KS=1,4)
      GO TO 12600
12900 IF(L,EQ,6) GO TO 14100
      WRITE(6,36)      L,((MNKP(KS,KI,J,L),J=1,3),KS=1,4)
      GO TO 12600
14100  WRITE(6,142) KH(KI),L,((MXKP(KS,KI,J,L),J=1,3),KS=1,4)
      GO TO 12600
12800  WRITE(6,35) KH(KI), L,((MNKP(KS,KI,J,L),J=1,7),KS=1,4)
12600  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602)      KKK
      WRITE(6,27) (KM(KS),KS=1,4)
      WRITE(6,600)
      WRITE(6,130) (KH(KI),KI=1,9),KS=1,4)
      DO 13100          J=1,7
      WRITE(6,600)
      DO 13100          L=1,12
      IF(J.LE,3) GO TO 13200
      IF(J.GE,4) GO TO 13300
      IF(L,EQ,6) GO TO 13400
      WRITE(6,135)      L,((MNKP(KS,KI,J,L),KI=2,9),KS=1,4)
      GO TO 13100
13400  WRITE(6,136) IZ(J), L,((MNKP(KS,KI,J,L),KI=2,9),KS=1,4)
      GO TO 13100
13300  IF(L,EQ,6) GO TO 13700
      WRITE(6,138)      L,((MNKP(KS,KI,J,L),KI=1,8),KS=1,4)
      GO TO 13100
13700  WRITE(6,139) IZ(J), L,((MNKP(KS,KI,J,L),KI=1,8),KS=1,4)
13100  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602)      KKK
      WRITE(6,144) (IZ(J), J=1,7)
      WRITE(6,145) ((KM(KS),KS=1,4),J=1,7)
      DO 14600          KI=1,9
      WRITE(6,600)
      DO 14600          L=1,12
      IF(KI,EQ,1)      GO TO 14700

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        IF(KI.EQ.9) GO TO 14800
        IF(L.EQ.6) GO TO 14900
        WRITE(6,150)      L,((MNKP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 14600
14900    WRITE(6,151) KH(KI), L,((MNKP(KS,KI,J,L),KS=1,4),J=1,7)
        GO TO 14600
14700    IF(L.EQ.6) GO TO 15200
        WRITE(6,152)      L,((MNKP(KS,KI,J,L),KS=1,4),J=4,7)
        GO TO 14600
15200    WRITE(6,154) KH(KI), L,((MNKP(KS,KI,J,L),KS=1,4),J=4,7)
        GO TO 14600
14800    IF(L.EQ.6) GO TO 15500
        WRITE(6,156)      L,((MNKP(KS,KI,J,L),KS=1,4),J=1,3)
        GO TO 14600
15500    WRITE(6,157) KH(KI), L,((MNKP(KS,KI,J,L),KS=1,4),J=1,3)
14600    CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,602) KKK
        WRITE(6,144) (IZ(J), J=1,7)
        WRITE(6,153) ((KM(KS),KS=1,4),J=1,7)
        DO 15800 L=1,12
        WRITE(6,600)
            DO 15800 KI=1,9
                IF(KI.EQ.1) GO TO 15900
                IF(KI.EQ.5) GO TO 16000
                IF(KI.EQ.9) GO TO 16100
                WRITE(6,162) KH(KI), ((MNKP(KS,KI,J,L),KS=1,4),J=1,7)
                GO TO 15800
16000    WRITE(6,163) L, KH(KI), ((MNKP(KS,KI,J,L),KS=1,4),J=1,7)
                GO TO 15800
15900    WRITE(6,164) KH(KI), ((MNKP(KS,KI,J,L),KS=1,4),J=4,7)
                GO TO 15800
16100    WRITE(6,165) KH(KI), ((MNKP(KS,KI,J,L),KS=1,4),J=1,3)
15800    CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,602) KKK
        WRITE(6,166) (KH(KI),KI=1,9)
        WRITE(6,167) ((KM(KS),KS=1,4),KI=1,9)
        DO 16800 L=1,12
        WRITE(6,600)
            DO 16800 J=1,7
                IF(J.LE.3) GO TO 16900
                IF(J.EQ.4) GO TO 17000
                IF(J.GT.4) GO TO 17100
16900    WRITE(6,172) IZ(J),((MNKP(KS,KI,J,L),KS=1,4),KI=2,9)
                GO TO 16800
17000    WRITE(6,173) L, IZ(J),((MNKP(KS,KI,J,L),KS=1,4),KI=1,8)
                GO TO 16800
17100    WRITE(6,174) IZ(J),((MNKP(KS,KI,J,L),KS=1,4),KI=1,8)
16800    CONTINUE
        WRITE(6,599)
        KKK=KKK+1
        WRITE(6,602) KKK
        WRITE(6,175) (IA(KP),KP=1,7)
        WRITE(6,176) ((KI,KI=1,9),KP=1,7)
        DO 17700 L=1,12
        WRITE(6,600)
            DO 17700 J=1,7
                IF(J.LE.3) GO TO 17800
                IF(J.EQ.4) GO TO 17900
                IF(J.GT.4) GO TO 18000
17800    WRITE(6,181) IZ(J),((MNKS(KP,KI,J,L),KI=1,9),KP=1,7)
                WRITE(6,182) IZ(J),((MNKS(KP,KI,J,L),KI=2,9),KP=1,7)
                GO TO 17700

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17900  WRITE(6,183 )      L, IZ(J),((MNKS(KP,KI,J,L),KI=1,8),KP=1,7)
      GO TO 17700
18000  WRITE(6,189 )      IZ(J) ,((MNKS(KP,KI,J,L),KI=1,8),KP=1,7)
17700  CONTINUE
      WRITE(6,599)
      KKK=1 +KKK
      WRITE(6,602)      KKK
      WRITE(6,175 )      (IA(KP),KP=1,...
      WRITE(6,184 )      ((KI,KI=1,9),KP=1,7)
      DO 18500          J=1,7
      WRITE(6,600)
      DO 18500 L=1,12
      IF(J.LE.3) GO TO 18600
      IF(J.GE.4) GO TO 18700
      WRITE(6,181)      L,((MNKS(KP,KI,J,L),KI=1,9),KP=1,7)
      GO TO 18500
18800  WRITE(6,190 ) IZ(J),L ,((MNKS(KP,KI,J,L),KI=1,9),KP=1,7)
      GO TO 18500
18600  IF(L.EQ.6) GO TO 19300
      WRITE(6,191 )      L ,((MNKS(KP,KI,J,L),KI=2,9),KP=1,7)
      GO TO 18500
19300  WRITE(6,192 ) IZ(J), L ,((MNKS(KP,KI,J,L),KI=2,9),KP=1,7)
      GO TO 18500
18700  IF(L.EQ.6) GO TO 19400
      WRITE(6,189 )      L ,((MNKS(KP,KI,J,L),KI=1,8),KP=1,7)
      GO TO 18500
19400  WRITE(6,195 ) IZ(J), L ,((MNKS(KP,KI,J,L),KI=1,8),KP=1,7)
18500  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602)      KKK
      WRITE(6,196 )      (IA(KP),KP=1,7)
      WRITE(6,197)      ((J,J=1,7),KP=1,7)
      DO 19800          KI=1,9
      WRITE(6,600)
      DO 19800 L=1,12
      IF(KI.EQ.1) GO TO 19900
      IF(KI.EQ.9) GO TO 20001
      IF(L.EQ.6) GO TO 20100
      WRITE(6,202)      L ,((MNKS(KP,KI,J,L), J=1,7),KP=1,7)
      GO TO 19800
20100  WRITE(6,203) KH(KI), L ,((MNKS(KP,KI,J,L), J=1,7),KP=1,7)
      GO TO 19800
19900  IF(L.EQ.6) GO TO 20400
      WRITE(6,205)      L ,((MNKS(KP,KI,J,L), J=4,7),KP=1,7)
      GO TO 19800
20400  WRITE(6,206) KH(KI),L ,((MNKS(KP,KI,J,L), J=4,7),KP=1,7)
      GO TO 19800
20001  IF(L.EQ.6) GO TO 20700
      WRITE(6,208)      L ,((MNKS(KP,KI,J,L), J=1,3),KP=1,7)
      GO TO 19800
20700  WRITE(6,209) KH(KI), L ,((MNKS(KP,KI,J,L), J=1,3),KP=1,7)
19800  CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602)      KKK
      WRITE(6,210 )      (KH(KI),KI=1,9)
      WRITE(6,211 )      ((KP,KP=1,7),KI=1,9)
      DO 21200          L=1,12
      WRITE(6,600)
      DO 21200          J=1,7
      IF(J.LE.3) GO TO 21300
      IF(J.EQ.4) GO TO 21400
      IF(J.GT.4) GO TO 21500
21300  WRITE(6,216) IZ(J),((MNKS(KP,KI,J,L),KP=1,7),KI=2,9)

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21400 WRITE(6,217) L, IZ(J), ((MNKS(KP,KI,J,L), KP=1,7), KI=1,8)
      GO TO 21200
21500 WRITE(6,218) IZ(J), ((MNKS(KP,KI,J,L), KP=1,7), KI=1,8)
21200 CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,210) (KH(KI), KI=1,9)
      WRITE(6,603) ((KP, KP=1,7), KI=1,9)
      DO 21900 J=1,7
        WRITE(6,600)
        DO 21900 L=1,12
          IF(J.LE.3) GO TO 22000
          IF(J.GE.4) GO TO 22100
22000 IF(L.EQ.6) GO TO 22200
          WRITE(6,223) L, ((MNKS(KP,KI,J,L), KP=1,7), KI=2,9)
          GO TO 21900
22200 WRITE(6,224) IZ(J), L, ((MNKS(KP,KI,J,L), KP=1,7), KI=2,9)
          GO TO 21900
22100 IF(L.EQ.6) GO TO 22500
          WRITE(6,218) L, ((MNKS(KP,KI,J,L), KP=1,7), KI=1,8)
          GO TO 21900
22500 WRITE(6,217) IZ(J), L, ((MNKS(KP,KI,J,L), KP=1,7), KI=1,8)
21900 CONTINUE
      WRITE(6,599)
      KKK=KKK+1
      WRITE(6,602) KKK
      WRITE(6,226) (IZ(J), J=1,7)
      WRITE(6,227) ((KP, KP=1,7), J=1,7)
      DO 22800 L=1,12
        WRITE(6,600)
        DO 22800 KI=1,9
          IF(KI.EQ.1) GO TO 22900
          IF(KI.EQ.5) GO TO 23000
          IF(KI.EQ.9) GO TO 23100
          WRITE(6,232) KH(KI), ((MNKS(KP,KI,J,L), KP=1,7), J=1,7)
          GO TO 22800
22900 WRITE(6,233) KH(KI), ((MNKS(KP,KI,J,L), KP=1,7), J=4,7)
          GO TO 22800
23000 WRITE(6,234) L, KH(KI), ((MNKS(KP,KI,J,L), KP=1,7), J=1,7)
          GO TO 22800
23100 WRITE(6,235) KH(KI), ((MNKS(KP,KI,J,L), KP=1,7), J=1,3)
22800 CONTINUE
27 FORMAT(1H0,10HSONNENHOE,17X,I2,3(27X,I2),/)
28 FORMAT(1H0,4H AZI,4H LEV,4H ALT,4(1X,7I4))
33 FORMAT(1H ,4X,I4,4X,4(1X,7I4))
34 FORMAT(1H ,4X,I4,4X,4(1X,12X,4I4))
35 FORMAT(1H ,I4,I4,4X,4(1X,7I4))
36 FORMAT(1H ,4X,I4,4X,4(1X,3I4,16X))
37 FORMAT(1H0,4H LEV,4H ALT,4H AZI,4(1X,7I4))
41 FORMAT(1H0,4H WVL,4H LEV,4H AZI,4(1X,7I4))
42 FORMAT(1H0,4H ALT,4H LEV,4H AZI,4(1X,7I4))
44 FORMAT(1H ,4X,I4,4X,3(1X,4I4))
45 FORMAT(1H0,4H LEV,8X,9(1X,5X,I2,5X),/)
47 FORMAT(1H0,4H AZI,4H LEV,4H SON,7(1X,4I4))
49 FORMAT(1H0,4H ALT,8X,7(1X,6X,I4,6X),/)
50 FORMAT(1H0,4H LEV,4H AZI,4H SON,7(1X,4I4))
52 FORMAT(1H ,4X,I4,4X,7(1X,4I4))
57 FORMAT(1H ,4X,I4,4X,51X,4(1X,4I4))
58 FORMAT(1H ,I4,I4,4X,51X,4(1X,4I4))
60 FORMAT(1H ,4X,I4,4X,3(1X,4I4))
61 FORMAT(1H ,I4,I4,4X,3(1X,4I4))
62 FORMAT(1H ,I4,I4,4X,7(1X,4I4))
67 FORMAT(1H0,4H LEV,4H ALT,4H SON,7(1X,4I4))
74 FORMAT(1H ,I4,I4,4X,4(1X,12X,4I4))
75 FORMAT(1H0,4H AZI,4H WVL,4H LEV,4(2X,9I3))

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78  FORMAT(1H ,4X,I4,4X,4(2X,9I3))
79  FORMAT(1H ,I4,I4,4X,4(2X,9I3))
80  FORMAT(1H0,4H LEV,4H WVL,4H AZI,4(1X,7I4))
83  FORMAT(1H ,4X,I4,4X,4(1X,7I4))
84  FORMAT(1H ,I4,I4,4X,4(1X,7I4))
91  FORMAT(1H0,4H WVL,4H AZI,4H SON,9(1X,4I3))
94  FORMAT(1H ,4X,I4,4X,9(1X,4I3))
95  FORMAT(1H ,I4,I4,4X,9(1X,4I3))
97  FORMAT(1H0,4H AZI,4H LEV,4H ALT,4(1X,7I4))
102 FORMAT(1H0,4H WVL,4H AZI,4H ALT,4(1X,7I4))
107 FORMAT(1H0,4H ALT,4H WVL,4H AZI,4(1X,7I4))
111 FORMAT(1H0,4H WVL,4H ALT,4H SON,7(1X,4I4))
114 FORMAT(1H0,4H ALT,4H WVL,4H SON,7(1X,4I4))
117 FORMAT(1H0,4H WVL,4H AZI,4H SON,7(1X,4I4))
120 FORMAT(1H0,4H WVL,4H LEV,4H ALT,4(1X,7I4))
125 FORMAT(1H0,4H LEV,4H WVL,4H ALT,4(1X,7I4))
130 FORMAT(1H0,4H ALT,4H WVL,4H LEV,4(2X,9I3))
135 FORMAT(1H ,4X,I4,4X,4(2X,3X,8I3))
136 FORMAT(1H ,I4,I4,4X,4(2X,3X,8I3))
138 FORMAT(1H ,4X,I4,4X,4(2X,8I3,3X))
139 FORMAT(1H ,I4,I4,4X,4(2X,8I3,3X))
142 FORMAT(1H ,I4,I4,4X,4(1X,3I4,16X))
144 FORMAT(1H0,12X,7(1X,6X,I4,6X))
145 FORMAT(1H0,4H LEV,4H WVL,4H SON,7(1X,4I4))
150 FORMAT(1H ,4X,I4,4X,7(1X,4I4))
151 FORMAT(1H ,I4,I4,4X,7(1X,4I4))
153 FORMAT(1H0,4H WVL,4H LEV,4H SON,7(1X,4I4))
154 FORMAT(1H ,I4,I4,4X,5I4,4(1X,4I4))
156 FORMAT(1H ,4X,I4,4X,3(1X,4I4))
157 FORMAT(1H ,I4,I4,4X,3(1X,4I4))
162 FORMAT(1H ,4X,I4,4X,7(1X,4I4))
163 FORMAT(1H ,I4,I4,4X,7(1X,4I4))
164 FORMAT(1H ,4X,I4,4X,5I4,4(1X,4I4))
165 FORMAT(1H ,4X,I4,4X,3(1X,4I4))
166 FORMAT(1H0,12X,9(1X,5X,I2,5X))
167 FORMAT(1H0,4H LEV,4H ALT,4H SON,9(1X,4I3))
172 FORMAT(1H ,4X,I4,4X,13X,8(1X,4I3))
173 FORMAT(1H ,I4,I4,4X,8(1X,4I3))
174 FORMAT(1H ,4X,I4,4X,8(1X,4I3))
175 FORMAT(1H0,12X,7(3X,3X,I3,3X))
176 FORMAT(1H0,4H WVL,4H ALT,4H LEV,7(3X,9I1))
181 FORMAT(1H ,4X,I4,4X,7(3X,9I1))
182 FORMAT(1H ,4X,I4,4X,7(3X,1X,8I1))
183 FORMAT(1H ,I4,I4,4X,7(3X,8I1,1X))
184 FORMAT(1H0,4H ALT,4H WVL,4H LEV,7(3X,9I1))
189 FORMAT(1H ,4X,I4,4X,7(3X,8I1,1X))
190 FORMAT(1H ,I4,I4,4X,7(3X,9I1))
191 FORMAT(1H ,4X,I4,4X,7(3X,1X,8I1))
192 FORMAT(1H ,I4,I4,4X,7(3X,1X,8I1))
195 FORMAT(1H ,I4,I4,4X,7(3X,8I1,1X))
196 FORMAT(1H0,12X,7(3X,2X,I3,2X))
197 FORMAT(1H0,4H ALT,4H WVL,4H LEV,7(3X,7I1))
202 FORMAT(1H ,4X,I4,4X,7(3X,7I1))
203 FORMAT(1H ,I4,I4,4X,7(3X,7I1))
205 FORMAT(1H ,4X,I4,4X,7(3X,3X,4I1))
206 FORMAT(1H ,I4,I4,4X,7(3X,3X,4I1))
208 FORMAT(1H ,4X,I4,4X,7(3X,3I1,4X))
209 FORMAT(1H ,I4,I4,4X,7(3X,3I1,4X))
210 FORMAT(1H0,12X,9(3X,2X,I3,2X))
211 FORMAT(1H0,4H WVL,4H ALT,4H AZI,9(3X,7I1))
216 FORMAT(1H ,4X,I4,4X,10X,8(3X,7I1))
217 FORMAT(1H ,I4,I4,4X,8(3X,7I1))
218 FORMAT(1H ,4X,I4,4X,8(3X,7I1))
223 FORMAT(1H ,4X,I4,4X,10X,8(3X,7I1))
224 FORMAT(1H ,I4,I4,4X,10X,8(3X,7I1))
226 FORMAT(1H0,12X,7(3X,2X,I3,2X))

```

```
227     FORMAT(1H0,4H WVL,4H ALT,4H AZI,7(3X,7I1))
232     FORMAT(1H ,4X,I4,4X,7(3X,7I1))
233     FORMAT(1H ,4X,I4,4X,30X,4(3X,7I1))
234     FORMAT(1H ,I4,I4,4X,7(3X,7I1))
235     FORMAT(1H ,4X,I4,4X,3(3X,7I1))
490     FORMAT(1H0,4H AZI,8X,7(1X,6X,I4,6X ),//)
599     FORMAT(1H1)
600     FORMAT(1H0)
601     FORMAT(1H0,10HMAX  TABLE,I3)
602     FORMAT(1H0,10HMIN  TABLE,I3)
603     FORMAT(1H0,4H ALT,4H WVL,4H AZI,9(3X,7I1),
850     FORMAT(1H0,4H WVL,4H LEV,4H SGN,7(1X,4I4))
851     FORMAT(1H0,4H LEV,4H WVL,4H SGN,7(1X,4I4))
      STOP
END
```

SONNENHOHE

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Takao Sato

[illegible]